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Patent Amendment

REMARKS

This application has been carefully reviewed in light of the Office Action dated June 16, 2004. Applicants have amended claims 1, 5, 8, 12 and 15. Reconsideration and favorable action in this case are respectfully requested.

Applicants have updated the priority information on page 1 of the present specification and corrected several typographical errors.

The Examiner has rejected claims 1, 5, 12 and 15 under 35 U.S.C. §112, second paragraph. Applicants have amended the claims in accordance with the Examiner's concerns, with the following exception of modifying "the steps" in line 2 of claim 1. "The steps" is commonly used in almost all patents for method claims.

The Examiner has rejected claims 1-15 under 35 U.S.C. §102(e) as being unpatentable over U.S. Pat. No. 6,718,164 to Korneluk. Applicants have reviewed this reference in detail and does not believe that it discloses or makes obvious the invention as claimed.

Korneluk regulates the temperature at a heat-sensitive module (160) by monitoring actual temperature at the module (col. 3, lines 15-21) and interrupting the flow of transmissions through that module based on current measured temperature (T) and change in temperature (dT/dt) (col. 3, lines 21-48). In the only embodiment described in Korneluk, the heat-sensitive module is a power amplifier, and its heat is reduced by interrupting transmissions through the power amplifier (col. 3, line 63 through col. 4, line 10 and Figure 1).

In the invention defined by claim 1, an excessive temperature at a first processing module is reduced by modifying parameters for executing tasks on one or more adjacent processing modules in order to reduce heat generated by the adjacent processing modules and contributing to the excessive temperature at the first processing module. Thus, using

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the example shown in Figure 10 of the present specification, if an excessive temperature is detected at MPU 12, it can be reduced by rescheduling tasks executed by DSP1 14a or DSP2 14b, or by reducing the frequency of DSP1 or DSP2. Accordingly, a high priority task could continue to execute on MPU 12, with temperature problems ameliorated by modifying less important tasks on adjacent processor (page 15, lines 14-27).

The invention defined by claim 1 provides significant advantages. The operation of multiple processing modules is taken into consideration in response to an excessive temperature at a certain processing module. This provides greater flexibility in addressing temperature problems.

With regard to claim 2, Applicants disagree with the Examiner's contention that Korneluk illustrates the step of monitoring operations executed by the modules to determine a temperature. Korneluk measures temperature directly using a heat sensitive element (col. 3, lines 14-21). In the present application, one method of determining temperature-sensitive information is to monitor operations associated with a task, such as a data cache access (page 16, lines 1-7).

With regard to claim 3, Applicants disagree that Korneluk inherently calculates power dissipation information. As stated above, Korneluk measures temperature directly, as opposed to deriving it from power dissipation information as described in the present specification.

Claims 8-11 and 15 are allowable for reasons set forth in connection with claims 1-4.

Claims 5 and 12 have been rewritten in independent form. These claims address and embodiment where a task scenario is created prior to execution of tasks in a task list to determine whether excessive temperatures will be produced.

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The Korneluk reference does not show the use of task scenarios to determine excessive temperatures prior to executing task according to the scenario.

With the amendment to claims 5 and 12, a fee is due for two additional independent claims. A fee transmittal is attached hereto.

The Commissioner is hereby authorized to charge any fees or credit any overpayment, including extension fees, to Deposit Account No. 20-0668 of Texas Instruments Incorporated.

Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Alan W. Lintel, Applicants' Attorney at (972) 664-9595 so that such issues may be resolved as expeditiously as possible.

For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,



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